

291

6.6  
HW

Key

p326 15-31 odd

15.  $y = -2(x+3)^2$

$V(-3, 0)$

$x = -3$  a.o.s

opens down

17.  $y = 5x^2 - 6$

$V(0, -6)$

a.o.s  $x = 0$

opens up

19.  $y = -x^2 - 4x + 8$

$y - 8 = -x^2 - 4x$

$y - 8 = -1(x^2 + 4x + 4)$   
-4

$y - 12 = -(x+2)^2$

$y = -1(x+2)^2 + 12$

$V(-2, 12)$

$x = -2$

opens down

21.  $y = -3x^2 + 12x$

$y = -3(x^2 + 4x + 4)$   
-12

$y - 12 = -3(x+2)^2$

$y = -3(x+2)^2 + 12$

$V(-2, 12)$

$x = -2$

opens down

23.  $y = 4x^2 + 8x - 3$

$y + 3 = 4(x^2 + 2x + 1)$

$y + 7$

$y + 7 = 4(x+1)^2$

$y = 4(x+1)^2 - 7$

$V(-1, -7)$

a.o.s  $x = -1$

opens up

25.  $y = 3x^2 + 3x - 1$

$y + 1 = 3(x^2 + x + \frac{1}{4})$   
 $+ \frac{3}{4}$

$y + 1\frac{3}{4} = 3(x + \frac{1}{2})^2$

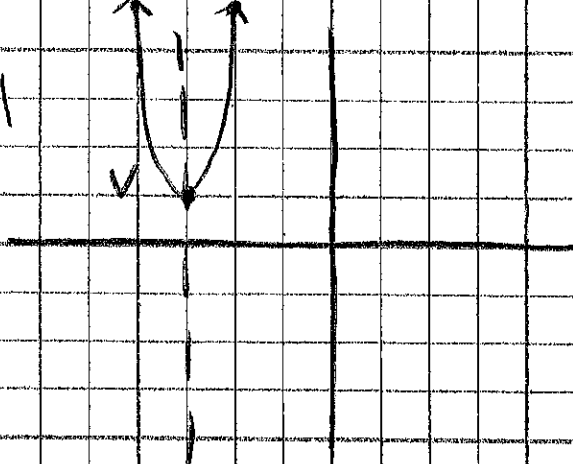
$y = 3(x + \frac{1}{2})^2 - 1\frac{3}{4}$

$V(-\frac{1}{2}, -1\frac{3}{4})$

a.o.s  $x = -\frac{1}{2}$

opens up

27.  $y = 4(x+3)^2 + 1$   
 $V(-3, 1)$



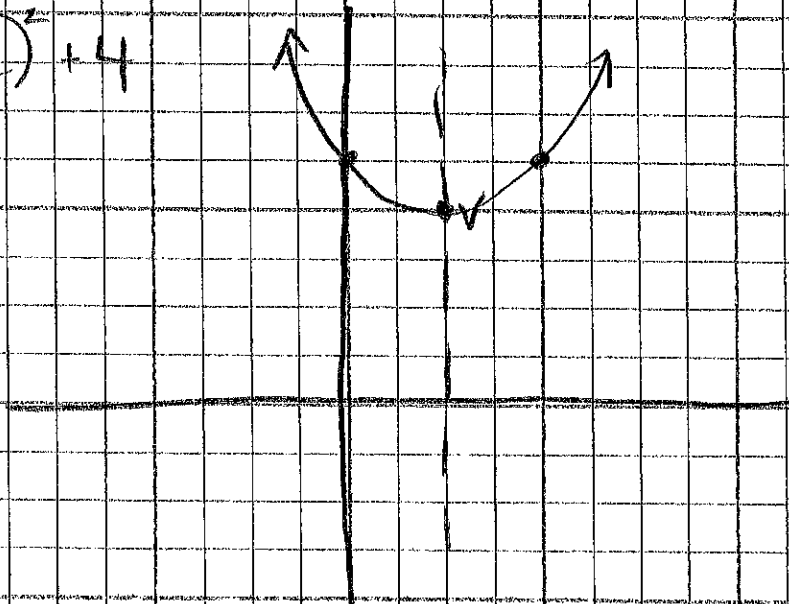
$(-2, 5)$   
 $(-4, 5)$

29.  $y = \frac{1}{4}(x-2)^2 + 4$

$V(2, 4)$

a.o.p.  
 $x = 2$

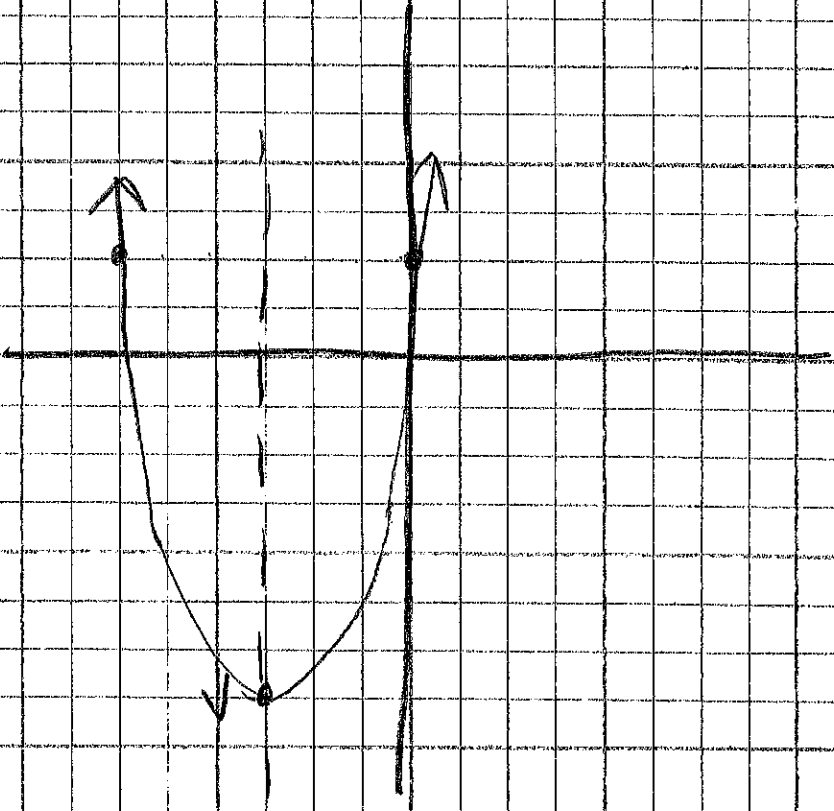
$(0, 5)$   
 $(4, 5)$



31.  $y = x^2 + 6x + 2$

$V \frac{-b}{2a} \quad \frac{-6}{2}$

$V(-3, -7)$



$(0, 2)$   
 $(-6, 2)$